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ABSTRACT

This study examined how an urban, elementary teacher study group helped five classroom teachers learn the practice of mentoring teacher candidates. A university liaison for one elementary school hosting interns led the group and conducted a longitudinal study of it as a context for collaborative learning. Teachers focused on making their teaching practice more accessible to interns and playing a more active role as teacher educators. Analysis of observations and transcripts from the study groups indicated that teachers took part in the collective negotiation of the meaning of their mentoring experience by participating in study group talk. Engaged participation in interactive or inquiry-oriented talk created learning opportunities for the joint construction of ideas about mentoring practice. A key feature of these learning opportunities was the way in which talk evolved to feature norms and processes for inquiry and analysis of artifacts of practice. As participants engaged in the collective study of mentoring practice, processes of inquiry began to take hold. Interactive talk in the study group led gradually to the joint construction and collective warranting of ideas about mentoring practice, which in turn were recorded in a curriculum for learning to teach at the school. (Contains 21 references.) (SM)

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Presented at the

American Educational Research Association

Annual Conference

New Orleans, Louisiana
April 3, 2002

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Making Sense of Collaborative Learning in a Mentor Teacher Study Group: Examining the Joint Construction and Collective Warranting of Ideas

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Introduction

Developing approaches to professional learning which match the aims of the kind of inquiry-oriented teaching called for by reformers has long been an elusive challenge (Little 1993; Ball 1996; Lampert and Ball 1999). Teachers, school administrators, teacher educators, and others concerned with school reform have been seeking to better understand the kinds of circumstances which contribute to teachers' professional learning. Researchers investigating teacher learning are beginning, however, to articulate an emerging consensus about a new conception of professional development which emphasizes professional learning situated in practice featuring extensive and sustained interaction among teachers (Ball, 1996; Putnam and Borko, 1997; Wilson and Berne, 1999).

A persistent theme in these reform ideas about professional development is the importance placed on collaborative work among colleagues. Lord (1994) was an early proponent of this idea with his conception of "critical colleagueship." According to Lord, a key point of such colleagueship is for teachers to learn to ask each other "increasingly more

powerful and revealing questions about the practice of teaching...." (Lord, 1994). Lord asserts that "this kind of collegiality cannot be fostered in environments of professional isolation. Teachers need to hear other points of view, need to air their own ideas among colleagues whom they trust and respect" (Lord 1994).

A key part of the emerging consensus among researchers about professional development emphasizes the value of teacher study groups as contexts for professional learning (Ball and Cohen, 1999; Wilson and Berne, 1999). Yet, as Wilson and Berne (1999) assert, "we know as little about what teachers learn in these kinds of forums as we do about what teachers learn in traditional staff development and in-service." How does critical colleagueship emerge in teacher study groups? Under what circumstances and according to what kinds of processes does professional conversation among colleagues lead to the posing of 'more powerful and revealing questions about the practice of teaching,' as Lord proposes? How does such questioning lead to learning and the development of practice?

This paper concerns a combined professional development and research effort which I generated to investigate how a teacher study group served as a context for helping five classroom teachers learn the practice of mentoring teacher candidates. In my role as university liaison for a school hosting teacher interns, I initiated and led a teacher study group, and conducted a longitudinal study of the group as a context for collaborative learning. The analysis of the larger study featured in this paper examines the process by which ideas about mentoring were jointly constructed and gained an increasingly collective

warrant in the study group over time. It proposes a theoretical conception for understanding the nature and value of study groups as contexts for professional learning, combining ideas about communities of practice and conversation analysis. It also introduces an analytic approach to examining such learning. While the study focuses on the development of mentoring practice, its implications seem useful as well in other study group contexts featuring interactive talk as a primary vehicle for learning.

Study Context

The study reported here took place at Capitol[1] Elementary School, an urban school with nearly 300 students in grades K-5, associated with the Michigan State University teacher preparation program. The school has a diverse student body and over 80% of Capitol families qualify for free or reduced lunch according to federal standards. The cluster placement plan featured in the Michigan State teacher preparation program enabled five teacher interns to be placed at Capitol during the year of the study. I was assigned as the program liaison responsible for interns' supervision for ten hours per week at the school. The Collaborating Teacher Study Group (CTSG) which is featured in the ensuing analysis was composed on a voluntary basis, of the five teachers who chose to work with teacher interns at Capitol during the year in which the study was undertaken. While every effort was made to emphasize the "voluntary" nature of the group, I felt strongly, as did the building

principal, John[2], that participation in the study group would help people with their mentoring roles and we both encouraged everyone to do so. So, we ended up with a "voluntary" group, which happened to include all five teachers working with interns in the building. This feature of the origin of the CTSG is critical, for it distinguishes this study and the study group from others that focus on genuinely voluntary groups where individual participants have chosen to participate exclusively on the basis of their own choice and intention to participate in collaborative activity. On the other hand, the circumstances of the formation of the CTSG are much like those of situations that arise in schools every day, where teachers' involvement in activity is a mixture of personal choice, the collective encouragement of colleagues, and the "invitation" of administrators.

This study draws upon both long-standing and newly emerging ideas and practices in qualitative research, and as such, brings with it both the resources and attendant dilemmas and challenges of those ideas and practices. As a study of learning in a teacher study group which I created and led, it falls at the intersection of ethnographic inquiry featuring a participant-observer, and a professional development intervention situated in the context of my own practice. I am thus observer / researcher and participant / teacher.

As a participant observer in the study group, as opposed to an outside researcher, I was privy to many layers of meaning in our talk which would otherwise have been more

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[1] The name, "Capitol," is a pseudonym.

[2] All personal names are pseudonyms.

obscure. I had worked with interns at Capitol the previous year, attended numerous faculty meetings, participated in staff retreats, and generally gotten to know much about the school's recent history and something of the complex social relations which characterize any small and intense work setting, such as an elementary school. I knew, for example, of both the recent effort teachers had expended in staff development work around mathematics, and some of the varying opinions held by study group members about the usefulness and challenges of that work. I was a regular visitor in the classrooms of study group members as I carried out my responsibilities related to observing and conferring with their interns. Thus, in many ways, my participant status in both the study group and the wider school culture privileged my vantage point and provided important contextual understanding for interpreting our joint work.

At the same time, however, study groups are not well understood as contexts for teacher learning (Ball, 1996; Wilson and Berne, 1999). This is in part due to the inherent complexity of language and its relationship to thought.

> What exactly are the functions of language in the classroom or in any situation where we claim that learning is (or should be) taking place? Linguists still struggle in their thickly textured studies of language use to solve the riddle of the relation between observed language behaviors that "come out of the mouth" and mental processes that go on "in the head"(Zentella, 1997, quoted in Heath, 2000).

Conducting research in such a little known context for teacher learning, and attempting to make sense of such a fundamental yet persistently enigmatic feature of human experience such as the relationship between talk and thinking presents significant challenges which

researchers are just beginning to explore. Grossman and colleagues have established a study group among high school teachers of history and English featuring, among other activities, reading history and literature together. They report on the complexities of this kind of research.

> Given the challenges of collecting and analyzing data on complex, longitudinal, multi-faceted projects, how do we address the issues of evidence of teacher development? How do we define learning in these contexts? Given that much of the data consists of teachers' discourse in group settings, how do we analyze discourse to investigate the learning of both individuals and the group as a whole? What timetable is appropriate for beginning to trace changes in actual classroom practice? And how can we develop analytical approaches that are rigorous yet respect the complexity of the enterprise? (Grossman, Wineburg, Woolworth, 1988, pp. 1-2, quoted in Wilson and Berne, 1999, p. 198)

My role in the group, whereby I was attempting to be both participant / colleague and group leader, was also complex and uncertain. Everyone recognized that the group met for the purpose of promoting professional learning and that I was the leader, or in essence, the teacher, for that effort. As with other teaching situations, that put me in a dominant power relationship with other participants (Tom, 1984, p. 78). They were putting themselves under my direction, at least to some extent, with the expectation that I would guide their learning and keep their best interests at heart. Similarly, they deferred to me to plan the activities we would engage in or, in other words, the curriculum of study for investigating mentoring practice. The fact that I would both plan the nature and circumstances of learning activities

we would engage in, and direct their enactment, gave me far greater power and influence over the affairs of the group than other participants.

Yet, in thinking about my role as group leader, I was particularly interested in fostering what Lord (1994) has called "critical colleagueship" among study group participants, including myself. Could fellow professional educators come together with different experiences, background ideas, role orientations, and commitments, yet genuinely collaborate around an agenda of joint work and agree to grapple with each others' points of view – not necessarily expecting to change viewpoints, but willing to take on the challenge?

It was in that middle ground that I wanted this study to take place, neither promoting myself, a fixed or singular approach to standards-based practice or mentoring, nor abandoning core values and visions of such practice. I wanted to attempt to foster the development of a kind of caring yet self-critical professional community. In my mind, I was striving for a stance of what Bruner has referred to as "critical open-mindedness" (Bruner 1990). It seemed to me that such open-mindedness was also at the heart of professional learning. Dewey's notion of "educative experience"(Dewey, 1938) provides one way of describing what I was after -- that which "arouses curiosity, strengthens initiative, and sets up desires and purposes that are sufficiently intense to carry a person over dead places in the future..." Maxine Greene refers to this same territory in her emphasis on fostering "wide-awakeness.."

> If teachers are not critically conscious, if they are not awake to their own values and commitments (and to the conditions working upon them), if they are not personally engaged with their subject matter and with the world around, I do not see how they can initiate the young into critical questioning or the moral life (Greene, 1978).

As group convener and leader I exercised the primary influence in introducing what we would talk about and how we would organize our talk in the CTSG. From previous experience in study groups, I came to this task with a strong preference for focusing our talk on artifacts of mentoring practice. By basing our talk on artifacts, I anticipated that we could all draw upon a common reference and share reasonably common access to the original experience. Using such artifacts, whether transcripts of practice or actual videotapes, would enable the close analysis of events and dialog without the pressure of "real time" and the multiple agendas present in actual practice. They would also enable everyone present to participate in interpreting the event of practice from a reasonably common starting point – what they observe and describe in the artifact. Other participants also have a chance to agree or disagree with what is interpreted, since they are all referring to a common source in the artifact. I thus made a considerable effort to generate artifacts of practice which we used as a focus of at least some CTSG talk in all but one of our nine two/three hour sessions from September - April.

Perspective / Theoretical Framework

In leading the study group and conducting the research about it, I was guided by socio-cultural perspectives on learning, especially that developed by Etienne Wenger (1998) in studying "communities of practice." Communities of practice, according to Wenger, are the natural result of people interacting in their daily lives. They arise as we participate in family, work, and school settings and join with others in making sense of our experience. They are reflected in the way we organize ourselves, communicate with others, and participate in any kind of activity. The construct offers a useful way of focusing on the social nature of learning.

According to Wenger however, participating in communities of practice does not necessarily promote learning or generate knowledge. Some communities of practice tend to perpetuate existing ways of doing things or making sense. Wenger's theory of social learning suggests how certain factors might have been important in transforming our joint practice in the study group into a collective learning experience. Wenger asserts that as individuals participate in such communities of practice, learning occurs as a result of negotiating new meaning from their engagement. Wenger sees this impulse toward negotiating meaning through engagement in the world as a fundamental human predisposition. In the teacher education study group, our regular activity and purpose for being there involved us in trying to make collective sense of our experiences of mentoring.

Using Wenger's ideas, we were attempting to balance two key elements of his theory of social learning: participation and reification. Participation involves both taking part in

activity and the relations with others which result from that taking part. Reification refers to the process of representing experience by turning it into words or other artifacts. Over time in our study group, we exemplified the process of reification as we began to evolve common ways of referring to and describing mentoring practices and problems. For example, I regularly used the phrase "talking out loud" to signal a key mentoring move in which the mentor shares her thinking with the novice in the course of teaching. Using that term in the group created a focus for the negotiation of meaning around that idea. Drawing upon Wenger's theory, our study group sessions held the potential to engage us in a dynamic interchange of participation and reification, through which we could gradually negotiate the meaning of our collective mentoring experience.

I assumed that if participating in the study of mentoring in our study group had led to professional learning, then that learning was likely to have developed as a result of certain qualities of the talk available in the study group, since that was the medium of our interaction. In order to analyze that talk, I developed a theoretical framework which used Wenger's "community of practice" construct, in conjunction with an approach to conversation analysis developed by O'Connor & Michaels (1993; 1996) to analyze participants' engagement in interactive talk.

O'Connor and Michaels studied how particular elementary school teachers use discussion to induct their students into the intellectual skill of discourse (O'Connor and Michaels 1993; 1996). They examined how two teachers re-stated or enlarged upon or re-

positioned students' comments in leading discussions for the purpose of inducting students into a kind of inquiry-oriented talk and engaging them with particular ideas under discussion. It seemed to me that their work might have some important implications for the role of talk in the CTSG. In revisiting their work, I was reminded that Goodwin (1990), developed the concept of "participant frameworks", which O'Connor and Michaels drew upon, to show how children, playing on the street in Philadelphia, used interactional talk to align each other in relation to claims about previous actions and statements. O'Connor & Michaels applied Goodwin's construct of participant frameworks to study interactive group discussions in elementary science and math classes. Their research focused on what they refer to as "re-voicing" strategies, a kind of participant framework, used by teachers to align students in various ways with or in opposition to each other and to particular academic (propositional) content. They documented how the teachers in their study used talk to reposition students' comments in ways that might clarify the message, direct it at other particular students, or connect it with teaching aims or purposes. O'Connor & Michaels claimed that such occasions constituted opportunities for learning for their students, whereby they were inducted into the norms and processes of intellectual discourse. Cazden (1988, p. 110) also wrote about teachers making similar moves which she described as "re-conceptualizations."

It seemed to me that this dynamic construct of participant frameworks was well matched with the spontaneous evolution of discourse among participants in the CTSG. At any given moment during a study group session, participants engaged each other in

conversation which proposed ideas or interpretations of events, and which in turn, aligned individuals in relation to each other and the particular content of those ideas or interpretations. For example, if we were viewing a videotape of teaching and trying to identify key elements of the practice which were important for interns to learn about, different CTSG participants would nominate different examples. In discussing these examples, teachers would often name them in relation to a larger idea about teaching, such as "drawing on students' background knowledge." In some cases, the same event would yield several explanatory phrases and CTSG participants would thus engage each other in entertaining various interpretations of the same episode of teaching.

It also seemed to me that the participant framework construct might offer a way to identify and characterize how CTSG talk led to learning about mentoring and to engagement in inquiry. O'Connor and Michaels stopped short of making claims that the students in the classrooms they studied learned as a result of re-voicing moves employed by their teachers because they lacked longitudinal data on individual students. I felt I had such data about CTSG participants and I was interested in seeing how the participant frameworks idea would help me investigate it.

For this paper, I will focus on the way in which certain episodes of group talk about mentoring, in which participants engaged each other in the kinds of re-voicing moves described above, featured the collaborative construction of a common topic or idea (Edelsky, 1993) about mentoring. Subsequent references to these ideas fostered a collective warranting

process by which emerging ideas gained credibility in the group. Ultimately, these ideas featured in a group-authored document called the "Curriculum for Learning to Teach at Capitol" which the participants used to guide their mentoring activities the following year.

Investigating the Joint Construction and Collective Warranting of Ideas in the Study Group

The experience of developing the Curriculum for Learning to Teach at Capitol, and teachers' enthusiasm for using it to guide their subsequent mentoring practice, was a crowning achievement for our work as a study group. The practices which participants both came to understand and committed themselves to initiating with interns in the ensuing year, including taking numerous concrete steps toward making their teaching practice more accessible to their interns, and playing a more active role as teacher educators, represented a significant departure from what had happened earlier in the year. In my mind, and in the minds of other CTSG participants,[3] the Curriculum thus represented the learning we had experienced and the new understandings we had generated. A copy of page one from the Curriculum appears in Table 1 on the next page.

[3] Participants described their views of the "Curriculum" and its significance in individual interviews at the end of the year.

Curriculum for Learning to Teach at Capitol Elementary School

What do interns need to know and be able to do? What can we do to support their learning?

	Intern	CT	Liaison
September	• Observing CT closely • Moving about the room and interacting with students; helping out with routines • Co-planning and co-teaching in areas of interest or confident knowledge • Attending to building a classroom learning community • Taking notes & jotting down questions	• Thinking out loud about planning; discussing step by step • Talk about "talking out loud" and "stepping in" moves by CT • "Talking out loud" / "stepping in and out" while co-teaching • De-briefing during teaching; noting kids' patterns of engagement, understanding • De-briefing after teaching, responding to intern's questions	• Co-observing CT with intern • Pointing out aspects of practice • Raising questions to prompt discussion • Video taping CT's teaching where desired • Working on First Days of School Studies in Guided Practice • Working on observing and de-briefing teaching in Guided Practice
CHECKPOINTS:	*Is the intern taking notes and asking questions? How comfortable is the two-way / three way communication? Is the intern beginning to notice details of management, variations in student engagement / approaches to learning? Is the intern picking up on CT's efforts to teach for understanding? Is the intern seeking out opportunities to take on teaching responsibilities?*		
October	• Continued co-planning & co-teaching, focusing on math and literacy • Where does the CT find resources to support teaching; exploring resources • Attending to details of management to support instruction; organizing materials, giving instructions, managing transitions, etc. • Taking the lead in de-briefing CT's teaching	• Demonstrating in-depth planning for units / lessons; timelines for teaching; assessment issues • Creating examples of detailed lesson plans • Identifying / sharing resource materials • Unpacking teaching in debriefing with intern, focusing on details of management and strategies to promote understanding (questioning, facilitating discussions, eliciting reasoning, etc.)	• Working on planning in Guided Practice • Observing and de-briefing interns' teaching / co-teaching • Video taping interns' teaching • Participating in 3-way co-planning sessions

Table 1: The Curriculum For Learning to Teach at Capitol Elementary School, Page 1

I was also struck by the way in which the ideas reflected in the Curriculum were collectively generated and endorsed. Even though I drafted the actual words that appear, from an outline created together on chart paper, each teacher contributed to the discussion, drawing upon a web of collective experience across the year to inform the thinking which led to the ideas recorded in the Curriculum. We then edited the draft wording together, and each teacher endorsed the ideas and commitments it set out for our future work. At the time, I assumed that the new understandings we achieved had been significantly influenced by the discourse in our study group, since that was the context in which the Curriculum was invented. The challenge for me was to analyze how study group talk had led to the joint construction and collective warranting of these new ideas and commitments about mentoring practice.

In beginning my analysis, I sensed a key moment in the study group session at which we generated the actual plan for creating the Curriculum. This occurred on March 9th, our seventh session, at which time Susan had presented video and text documentation of her work with her intern, Ben, on planning and teaching a unit on "transportation" in her kindergarten classroom. In the course of studying Susan's work, we realized that there were basic ideas about planning which Ben only came to understand with Susan's assistance on this unit in January and February. It was Martha who then suggested that there must be things which we could collectively do nearer the beginning of the school year to help interns

get a better start on learning to plan. Susan later nudged us toward action, saying "Well I think maybe something for us to work on for next year is coming up with some of those key things for us to work on as CTs...." As a result of that suggestion, we drafted the Curriculum on chart paper at our next session, drawing upon insights generated from our study group sessions across the year to that point.

In examining the talk which surrounded the emergence of that key idea on March 9th, I developed a conjecture that the points in the discussion which featured key insights or recommendations for ourselves, seemed to occur in conjunction with a collaborative construction of the focus or "floor" of our conversation. A key part of our discussion seemed to just "take off" from an observation by Pam about Ben as a learner. Partly with Martha's input, we began to talk about what interns needed to "bring to the table" in preparation for planning, and then what we needed to do to help them understand how to do that. The content of this episode represented some key ideas about mentoring. I wanted to know more about how they arose at that point in that session, and what it was about the character of our talk which fostered the joint construction of those ideas. It seemed sensible to me that inquiry in a group setting would require to some extent, at least, the collaborative construction of the floor of the conversation, so I decided to focus in particular on that aspect of our talk.

Edelsky (1993) has studied the collaborative construction of the floor in professional conversations among colleagues and developed key insights which I found useful in

considering how talk developed in the CTSG. She defines the floor as "the acknowledged what's-going-on within a psychological time / space" (Edelsky, 1993, p. 209). Edelsky noticed, among other things, that the female members of the staff group which she studied were particularly inclined toward and capable at using overlapping speech to jointly develop the floor of their conversation. This matched my initial observations of the CTSG.

To pursue this conjecture about the importance of collaboratively constructed floors or topics in our study group sessions, I also needed a way to characterize the speech interactions among participants and their apparent influence upon one another's thinking. To do this, I turned to the work cited previously by O'Connor & Michaels (1993; 1996) drawing upon the participant framework construct developed by Goodwin (1990). It seemed to me from examining numerous examples of study group talk, that the occasions when key ideas about mentoring were developed collectively, were characterized by speech exchanges which included both content about mentoring and an inquiry perspective. For example, participants might be discussing mentoring "moves" apparent in a videotaped conversation with an intern, and conducting the talk in a manner that posed conjectures or inferences about the meaning of the moves or their connections or implications for other situations. In contrast, there were other occasions in the study group sessions when an individual would share an account of some experience with an intern, but conduct the talk in such a way that inquiring comments and questions from others either were not accepted or were not pursued by other

group members. At such times there seemed to be little or no advance in our understanding of the situation, merely a reporting of it.

To pursue my analysis systematically, I constructed a set of detailed transcript excerpts which reflected the talk across all study group sessions as representatively as I could. I then catalogued the topics of these conversations to generate a more generic description of the kinds of mentoring content represented in the transcripts. I deliberately framed these descriptions in language that was related to the conception of "educative mentoring" (Feiman-Nemser 1996)which matched the inquiry orientation toward mentoring practice which I had been hoping to foster among CTSG participants. I wanted to note when such talk occurred in the study group. I saw identifying the mentoring content of our talk as a crucial element in determining how and what people had the opportunity to learn in the study group. The previously mentioned example where study group members described a moment in an observation of Sandy's teaching as "drawing on students' background knowledge" was generalized in my cataloging as "Identifying and articulating elements of a vision of good teaching," since this is regarded in the conception of "educative mentoring" as one aspect of a mentor's repertoire of practice. The list below summarizes the kinds of mentoring content I found in analyzing the set of transcripts from across the year.

> -- Identifying and articulating elements of a vision of good teaching as represented in observations and descriptions of artifacts of teaching or elements of that practice
> --Identifying ways for CTs / liaison to help interns notice and learn to analyze elements of good teaching

-- Drawing pedagogical implications of interns' actions as represented in observations and descriptions of artifacts of interns' practice or descriptions of interns' actions
-- Sharing ideas about pedagogical conversations with interns
-- Analyzing mentoring "moves" as represented in observations and descriptions of teachers' / liaison's practice
-- Making observations or conjectures or inferences about interns as learners
-- Making observations or conjectures or inferences about learning to teach

Since I also wanted a systematic way of identifying the presence of inquiry-oriented talk, I examined the transcript set for that purpose as well. I was interested in seeing how interactive talk may have occurred in such a way to achieve what O'Connor & Michaels described as aligning participants in relation to each other and the propositional (mentoring) content of the talk. I began to experiment with using the idea of participant frameworks to identify the kinds of talk which occurred in different CTSG sessions. O'Connor & Michaels had observed that the kind of participant framework they called "re-voicing moves," when invoked by a teacher, served to align students in various ways with or in opposition to each other and to particular academic content. It seemed to me that that construct could apply well to study group talk. I studied our first CTSG session in September in detail and analyzed what participants seemed to be doing with their talking turns that resembled "re-voicing moves." I drafted an initial list of these kinds of comments which occurred in the talk and which seemed to signal the presence of an inquiry orientation to the discourse.

For example, in that session we were studying a written observation of Sandy's teaching, which Megan (Sandy's intern) and I had observed, plus notes I had made on

Megan's response to the teaching. We were attempting to better understand what Megan was and was not noticing at that point in September. Participants' comments included a mix of specific observations about Sandy's teaching, occasional conjectures or tentative ways of interpreting Sandy's teaching moves, and inferences about a larger idea or principle that informed Sandy's teaching. These were the kind of comments that I generalized in my list on the previous page as "identifying and articulating elements of a vision of good teaching." Since I was interested in figuring out how our talk had influenced participants' learning, I also wanted to better understand the structure of that talk and what patterns I could find across sessions. I compared my study of the September session with a quicker analysis of a few other sessions. I began to find patterns in the talk across sessions, which resembled the kinds of "re-voicing" moves which O'Connor & Michaels had observed in elementary classrooms between teacher and students. I developed a kind of catalogue of such moves to help me bring a common analytic framework to the examination of study group sessions across the year.

Re-stating: to repeat an idea and invite additional attention or concurrence

Re-conceptualizing: to develop or broaden an example into a more general idea

Re-contextualizing: to shift the perspectives brought to bear on an idea or account

Recycling: to re-introduce an idea from earlier in the session to position it in relation to a current observation

Making conjectures: offering tentative readings of the meaning of a situation

Making inferences: identifying a larger idea or principle based upon evidence

After further analysis, I also found numerous examples in study group talk of participants making what O'Connor & Michaels had described as "warranted inferences." In a warranted inference, "the speaker is linking his/her utterance to that of the previous speaker and is making an inference that she believes to be warranted based on the previous utterance" (O'Connor and Michaels 1993). This combination of re-voicing moves, conjectures, and inferences seemed to me to offer a way of describing what made up the inquiry orientation of our talk and of determining its presence or absence at any given point in the talk. According to O'Connor & Michaels, I felt it should also be the case that when CTSG participants engaged each other in talk with a mentoring content, and engaged in the use of the kinds of inquiry-oriented speech moves listed above, they should experience opportunities for learning.

With these analytic tools in hand, I conducted a systematic analysis of the set of study group transcripts, beginning with breaking the talk into segments representing shifts in the "floor" or topic. Next I catalogued the presence of mentoring content and re-voicing moves or other inquiry-oriented speaking turns. Finally, drawing upon Edelsky's notion of a "joint floor," I looked for occasions when the topic or idea around which our talk was focused seemed to be jointly developed. I had a hunch that a key aspect of our work in generating the

Curriculum had to do with the way in which the ideas represented there were collectively warranted, and not just endorsed by one teacher and myself. In order to be somewhat systematic, I decided to look for occasions when two or more individuals (not including myself) exchanged four or more substantive talking turns around a common floor or topic about mentoring which included an inquiry orientation according to the way I had characterized it inductively from the transcripts.

In my analysis of seven of nine[4] study group sessions, I found thirty-eight such episodes of extended jointly constructed inquiry-related talk. In order to document the content of these episodes, I summarized the topic of each one in a brief phrase or sentence. The following are examples of my summaries of the jointly constructed ideas resulting from studying the transcript of a co-planning session in the January CTSG session which led us to beginning to articulate a process for learning to plan.

1. Connecting planning to intern's knowledge and interests
2. Connecting planning to what the intern is familiar or comfortable with
3. Planning goes back and forth between big ideas and planning for the details of teaching
4. Checking on the intern's sense-making during planning
5. Checking back with the curriculum during planning
6. Checking back on the purpose of the lesson during planning

The co-planning session under study involved Sandy, her intern, Megan, and me in generating a plan for a social studies lesson. To study the co-planning process, I had made a

[4] One session was not transcribed and the equipment malfunctioned in the other.

partial transcript and related summary of our talk. We had begun this session with very mixed feelings over the value of the co-planning session in question. Sandy and others in the group were quite concerned about the apparent miss-match between the amount of time we had spent in planning for what was intended as a twenty minute lesson. It had seemed to Sandy also, that my comments in the planning session went too deeply into the subject matter content for appropriate second grade expectations. After closely examining the transcript of the planning session, however, and noting recurrent patterns in our talk, teachers began to identify what Susan called a process of learning to plan. They also came to distinguish the different requirements of planning a lesson versus helping an intern learn to plan. The elements in the above list illustrate how studying artifacts of practice, like the co-planning session transcript and summary, engaged CTSG participants in re-thinking their mentoring experiences and led to the construction of new jointly warranted ideas. Table 2 shows an example of the development of an extended joint floor in the conversation from that January study group session.

In this excerpt, we are all focusing on a common referent – the transcript of a planning session. As group leader for this kind of activity, I am playing a fairly direct guiding role, calling attention to particular aspects of the transcript and inviting interpretation of them.

Table 2: An Extended Joint Floor in the Conversation

CTSG 1/22 TRANSCRIPT	COMMENTARY
David: yeah.. one of the things that I asked you to do as you were reading through this is see if there were any natural breaks in it and … for me.. I identified a break right at that point	David: Posing new task and citing an example EXTENDED JOINT FLOOR: CHECKING ON INTERN'S SENSE MAKING DURING PLANNING
Sandy: Yeah	
David: Yeah… that the .. the quality of the conversation shifted after that.. one of the things I … what does my next comment do?	David: Making an assertion about text, then a question to address the mentoring function of his actions
Susan: Draw Megan into it	
Anne: You ask her if it makes sense	Susan: Offering an assertion in response to question Anne: Identifying text which serves as an implied assertion in response to David's question
Susan: Asking her.. yeah.. what kind if sense she's been making of all this	Susan: Restating and implicitly endorsing Anne
David: Yeah and what's.. sort of re-grouping…….checking on Megan's ….. and then what do we do… Sandy comes up with another	David: Re-conceptualizing as "re-grouping" then moving ahead in the text

In this example, my invitation elicits speaking turns from Susan and Anne that invoke participant frameworks with an inquiry component – alternate assertions about the meaning of the transcript. I have asked them to characterize the impact of my comment in the planning

session on Megan. Together, Anne and Susan arrive at a way of describing this aspect of mentoring to assist planning – as checking on the intern's sense-making. This is a small but useful act of interpretation, lifting our thinking just a bit above the details of the actual conversation to characterize different parts of it. We were later able to recognize a pattern or process that was present in this extended planning conversation, precisely because our talk had generated a series of interpretive ideas about how to make sense of the planning session.

Having identified this set of 38 examples of jointly constructed and collectively warranted ideas about mentoring practice, I next went back to the Curriculum to see how many of them ended up in its text. I found that virtually every idea was represented in the Curriculum, and that those ideas were essentially what the Curriculum consisted of. Considering that the Curriculum was drafted at one session without any detailed examination of records from past sessions, and it represented participants' understandings and aspirations at that time about their mentoring practice, it seems inescapable to conclude that the jointly constructed and warranted ideas took special root in the landscape of their learning across the year. Those were the ideas which stuck and proved most powerful for them.

To illustrate how these ideas which arose out of the joint construction and warranting process across the year ended up being reflected in the Curriculum, the final section of this paper analyzes part of the conversation at the 3/25 study group session in which the Curriculum was drafted. It illustrates how ideas introduced earlier in the year re-emerged in

the group, and through the process of interactive talk gathered the collective warrant of the group.

Development of an Idea for the Curriculum Through Interactive Talk

A central idea arising from the work of the CTSG across the year and reflected throughout the Curriculum is that: *the experienced teacher's practice can become a key context for the novice's learning*. This principle is particularly evident in the column of the Curriculum labeled "CT" (Collaborating Teacher) shown in Table 1. For example, the ideas listed about talking and thinking out loud about their teaching, and demonstrating their actual planning process in depth arose directly out of CTSG discussions and reflected CTs' recognition of this principle.

This central theme which developed out of our work across the year, that the experienced teacher's practice can become a key context for the novice's learning, was introduced into the discussion at the 3/25 CTSG session right away in opening comments by Pam.

> I mean the first thing that comes to my mind was observation... when they come in and they're first observing ... how to structure that so ... and I think that to some degree they're not going to be watching everything we want them to because they're not there yet but what kind of guidelines can we give them so they'll notice what's important? (3/25 CTSG Transcript)

At first glance, it may seem obvious that novice teachers would learn a great deal from the opportunity to observe an experienced teacher day in and day out as she teaches. However,

as we had discovered, many interns have trouble making good use of this experience because they do not necessarily notice what is significant and cannot easily "get inside" the complex life of a classroom without assistance. Interns and other novices do not necessarily see what we want them to see in classrooms. They also cannot necessarily tell what an experienced teacher is thinking about her teaching as it unfolds in the classroom, and what on-the-spot decisions she is making to adapt her plans to the situation. They may also have difficulty with framing questions about what they see because the range of activities and details can be overwhelming.

CTs at Capitol came to appreciate these difficulties over the year and their conversation illustrates how they learned to take both practical and intellectual steps to "open up" their teaching to their interns. The excerpt below from the 3/25 CTSG session places Pam's introduction, quoted on the previous page, in the context of subsequent talk among participants.

Table 3: An Illustration of Interactive Talk

CTSG 3/25 TRANSCRIPT
Pam: I mean the first thing that comes to my mind was observation... when they come in and they're first observing ... how to structure that so ... and I think that to some degree they're not going to be watching everything we want them to because they're not there yet but what kind of guidelines can we give them so they'll notice what's important?
Anne: One thing that worked really well for me last year with Kevin but did not work well this year... was ... he and I spent quite a lot of time where I was thinking out loud and going through my planning and saying how does this sound and

he would bounce an idea off of me and I off of him and he entered into considering the ideas... of course at that point in time the decision was mine ... but he had a chance to see that thinking out loud process and we did that a lot.

Pam: (asks an inaudible question)

Anne: So, instead of my just sitting there and doing what I normally do... I did it in front of him ... and we sort of talked as we went along, collecting ideas... throwing out ideas ... I did it all orally essentially and went through the step by step process of planning ... and he was participating in a way too... he came up with some ideas and he experienced that process... Now that was not happening this year.

Pam: Why do you think it didn't happen this year?

Anne: Well, with Brenda's situation... she didn't have time ... she had to get out of here... it just didn't work.... but I think it would have made for better planning later if we'd gone through that period because she would have gotten a better idea of how

(Topic switched briefly before Susan returns to this topic)

Susan: I did a lot of what Anne was describing... constantly talking out loud ... talking through what we were going to do and why...

Anne: And did he take... did she take notes ... Kevin last year took notes through all that ... and I said to him.. jot down questions and then after school that's what we did ... we went back... he kind of de-briefed me

Pam: I like that

Susan: I think that's an important piece

Pam: Karen did that and I think we did that sort of thing for some... I don't know about Megan or Tammy?

Susan: Ben did that sort of thing when he came in .. but to have them write down questions...

Pam: Or us, asking them ... why do you think I did this instead of this? I mean if they're not being able... maybe that's the first checkpoint we should have... if they're not able to come up with observations and insights... well why did you decide to do this instead of this ... then we need to be asking them why

This excerpt of conversation illustrates many important aspects of interactive talk.. First, as Pam, Anne, and later Susan join into this conversation their statements are both an occasion for thinking and a reflection of the thinking each is doing. Thus participating in such a conversation offers an opportunity for joining into a process of thinking. Examining the record of such a conversation offers the analyst a vantage point for studying participants' thinking and how it was influenced by the conversational interaction. In other words, it offers a perspective for examining their "negotiation of meaning"[Wenger, 1998 #239] in the course of participating in the talk.

Pam introduces the topic of observation by interns at the beginning of the school year. In doing so, Pam offers both a conjecture about interns as learners, a kind of proposed reading of this circumstance – "I think to some degree they're not going to be watching everything we want them to..." – and an implicit inference about mentoring practice – that CTs will need to structure interns' experience by providing "guidelines" to help them "notice what's important." By ending her comments with the question, "what kind of guidelines can we give them...," Pam's remarks operate as a "participant framework" (Goodwin, 1990), effectively opening up the next turn in the discussion to someone who will respond to that invitation. At the same time, the participant framework invoked by Pam's comment has the

effect of inviting others participating in the discussion to consider her conjecture and implicit suggestion about practice, thus engaging them in thinking about these ideas.

In the brief interchange that follows Pam's opening remark, we see how Anne responds to the participant framework invoked by Pam's invitation and describes an approach to mentoring which she had developed the previous year with her intern, Kevin, whereby she instituted a regular after school de-briefing time to help him understand her teaching. By putting these ideas on the table, Anne is herself invoking a participant framework, engaging other participants in considering a specific example about mentoring practice and, in so doing, she's clarifying and articulating a key underlying principle about mentoring as she describes it as a process of "thinking out loud." This latter idea is an example of how certain kinds of interactive talk have an inquiry content based on the way in which they invite others to move beyond the immediate description of particular circumstances or experiences to consider them from new perspectives or in light of larger ideas or principles, or in terms of underlying assumptions. By calling her activity "thinking out loud," Anne is highlighting the educational significance of her action as a mentor and conceptualizing it in relation to a broader principle of mentoring practice. This use of the phrase "thinking out loud" also contributes to "reifying" (Wenger, 1998) that idea in the collective practice of the group.

In response to Pam's probing, Anne reveals that it has not worked so well this year because her current intern, Brenda, is unable to spend such expansive time with her after

school. As this series of talking turns unfolds, we also see the development of what Edelsky (1993) calls a collaborative floor in the discussion. Each successive speaker is contributing to an evolving idea about helping interns learn from observing teaching. Conversations do not always go like this, in general, and in the CTSG. People do not necessarily make sense of and build upon one another's ideas. They do not necessarily ask each other clarifying or probing questions, as Pam did in this instance, to elicit further description of an idea. When they do work collaboratively, however, and when they invoke participant frameworks that bring an inquiry orientation to the unfolding talk, participants in interactive talk have the potential of constructing joint knowledge, as we will see in this example.

Susan echoes Anne's enthusiasm for the kind of talking out loud she has described. Anne counters with a question to emphasize the importance she places on having the intern write down notes during such conferences. Susan and Pam endorse this additional detail and Pam concludes the interchange with the idea that on some occasions it is important for the teacher to ask the intern directly about his or her observations or thinking if they are unable to come up with questions and observations on their own.

The idea of "talking out loud" is a basic strategy for helping a novice learn in the context of an experienced teacher's practice, whether it be in the context of planning or teaching or reflecting after teaching. Unless the experienced teacher takes deliberate steps to reveal her thinking to the novice, key aspects of the decision-making and other intellectual work involved in these fundamental tasks of teaching remain invisible to the novice

(Tomlinson, 1995, p.43). Anne and Susan were introduced to talking out loud the previous year when I worked with them with their first interns. We reminded each other of it at our September CTSG session as we analyzed an observation of Sandy working with her intern. Susan, Pam, and Anne then volunteered examples of their own subsequent efforts to implement the idea at the October CTSG session. In that October session, Susan added the idea of maintaining eye contact with her intern, Ben, while teaching, to signal him to pay particular attention to various aspects of what she was doing or saying. She also referred, at that time, to having Ben keep notes of such experiences.

Now, with Anne's anecdote, Susan is struck by the additional idea of having the intern "write down questions." For Susan, that phrase had come to have special meaning across the year. This idea recycles a suggestion she made originally back in September as we were discussing Sandy's intern, Megan, and her difficulties in "getting inside" Sandy's teaching. However, in the meantime, Susan had ended up struggling to help her intern, Ben, learn the process of planning for instruction. Among the patterns of his experience which she came to recognize, with the help of her colleagues, was his tendency to make affirmative noises (uh huh's) as they were planning together, without really coming to understand what they were talking about. One of the insights she learned in the process of helping Ben was to insist that he articulate his own response to their conversations, including putting key elements and questions in writing so she could see what sense he was actually making of their conversations.

In conjunction with this 'writing down questions' strategy, Pam also introduces the idea which was later adopted as a key point in the "Curriculum," that there should be "checkpoints" to clarify our joint expectations and to alert CTs and myself about potential concerns about interns' learning. The idea of having the intern write down questions, and coining the term "checkpoints" to describe the emerging understanding among teachers about taking an active role in assessing interns' learning from their mentors' practice emerge at the end of this extended joint floor in the discussion. These ideas are also framed in language that invites a collective warrant from the group, or continued revision. In essence, this process of negotiating the meaning of a collective instance of practice such as "talking out loud" represents a "regime of competence" (Wenger, 1998) emerging in the CTSG.

With this one set of examples, we see how three individuals participating in interactive talk created an opportunity for mutual learning. They engaged each other in new thinking and joint knowledge construction. The initial idea of "talking out loud" became articulated and collectively warranted in a series of related practical "mentoring moves" from literally talking through one's thinking, to having the intern keep notes of out-loud talking, to signaling the intern through "eye contact" while teaching, to occasionally asking questions or having the intern write down questions to test the understanding of the intern listening to the talk. By invoking participant frameworks in the course of interactive talk, three individuals also engaged each other in inquiry-related tasks associated with the intellectual work of teaching like identifying underlying principles and key features of learning experiences, re-

cycling ideas from earlier experiences with practice to contribute to new contexts and generating mutually warranted norms and expectations for a common practice of mentoring. In short, they have constructed joint knowledge about mentoring practice.

Conclusion

From this examination of the joint construction and warranting of ideas about mentoring across the year , we can see how CTSG participants took part in the collective negotiation of the meaning of their mentoring experience through participation in study group talk. Engaged participation in the kind of interactive or inquiry-oriented talk which has been described created learning opportunities for the joint construction of ideas about mentoring practice. A key feature of these learning opportunities was the way in which talk evolved to feature norms and processes for inquiry and the analysis of artifacts of practice. As participants took on the these forms of talk, these experiences led, in turn, to the development of an expanded repertoire of mentoring practices and a collective growth in competence among mentor teachers in the group. As Wenger (1998) asserts, learning in communities of practice occurs when experiences of meaning occur in the context of developing competence.

As CTSG participants engaged in the collective study of mentoring practice, processes of inquiry began to take hold as we noticed patterns in interns' learning and in our mentoring efforts. My analysis illustrates how interactive talk in the study group led

gradually to the joint construction and collective warranting of ideas about mentoring practice, which in turn were recorded in the Curriculum for Learning to Teach at Capitol.

Summarizing this process in broader conceptual framework, the participant framework construct offers an explanation for how the process of negotiating meaning in study groups occurs and a means of analyzing it. As individuals engage each other in inquiry-oriented talk with propositional content (in this case about mentoring), they implicitly invite one another to align themselves in agreement or in opposition to the ideas under consideration. The process of collective warranting described here, if carried out over time in a study group, seems to result in the joint construction of knowledge and the development of a community of practice in which participants are increasingly disposed toward common understandings and commitments toward practice.

A key dimension of this work which I did not anticipate, was the reflexive link between "how people learned" and the formation of a learning community for professional practice. I expected the group to play a central role in the process of individuals' learning; however, I did not think ahead of time about the formation of such a collaborative study group as a key outcome of our learning. In other words, engaging in the kind of collective learning process examined here, not only results in the development of practice, but also in the creation of community around that practice. In that sense, participating in the community of practice was both a dimension of what people learned and a means for their learning.

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